



GDOT Publications

Policies & Procedures

Policy: 2450-1- Value Engineering

Section: Value Engineering

Office/Department: Office of Engineering Services

Reports To: Engineering Services

Contact: 404-631-1000

Code of Federal Regulations [Title 23 Part 627](#) Value Engineering defines Value Engineering (VE) as: "The systematic application of recognized techniques by a multi-disciplined team to identify the function of a product or service, establish a worth for that function, generate alternatives through the use of creative thinking, and provide the needed functions to accomplish the original purpose of the project, reliably, and at the lowest life-cycle cost without sacrificing safety, necessary quality, and environmental attributes of the project." For the Federal Highway Administration's (FHWA) VE policy see: <http://www.fhwa.dot.gov/ve/index.cfm>

At GDOT, Value Engineering Studies shall be performed for all projects with a total Programmed Cost including PE, Right of Way, Construction and Reimbursable Utilities of \$50,000,000 or greater in accordance with Chapter 2 of Title 32 of the Official Code of Georgia, Annotated as revised under subsection (d) of Code Section "32-2-41.2" except for any project procured in accordance with Code Sections 32-2-79, 32-2-80 and 32-2-81.

The optimal time to hold a VE Study is in conjunction with the Concept approval.

NOTE: FHWA's definition of a "Project" is: "A portion of a highway that a State proposes to construct, reconstruct, or improve as described in the Preliminary Design Report or applicable Environmental Document."

GDOT Design Project Managers shall:

- As part of concept development determine the need for VE Study.
- Provide VE Study request submittal to Engineering Services.
- Provide a Designer who is familiar with the project to be available to assist the VE Team for the duration of the VE Study.
- Participate in the VE Team's Presentation on the last day of the VE Study.
- Incorporate VE Study results into concept report.

VE Study request submittals shall:

- Be made a minimum of 60 working days prior to anticipated date of study.
- Include the following information in the request letter:
 - Project number, County and PI number
 - A detailed project description, including references to all bridges and major structures
 - Names of all Consultants involved in the project design, including contact person and phone number
 - The proposed let date of the project
 - The current status of the project design. For example, has the concept been approved, are preliminary bridge layouts complete, has a PFPR or FFPR been held? Also indicate the approximate plan completion percentage
 - The GDOT Design Phase Leader and GDOT Design Project Manager and phone number and the names of anyone from Design who will attend the VE Study

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- Any significant information that may affect the VE Study
- Include the most recent Concept. The Concept must match the proposed design.
- Include an up-to-date Cost Estimate. The Cost Estimate must match the proposed design and must have been updated within three (3) months of the VE Study Request.

The GDOT Project Manager will be responsible for preparing a review package for each VE Team member. This package will consist of:

- A half sized set of plans
- The current Concept
- An up-to-date Construction Cost Estimate
- An up-to-date Right of Way Cost Estimate
- An up-to-date Utility Relocation Cost Estimate

Additional information should be provided for use by the VE Team during the VE Study including, but not limited to:

- A display of the project layout including applicable typical sections.
- Traffic information utilized in the conceptual decisions.
- Accident data for any area with significant accidents.
- Aerial photo coverage of the project depicting corridors or interchange layouts.
- Information on current right of way values, consisting of such items as square foot or square meter market values for areas which will be affected by the project.
- Estimated right of way costs for each project based on actual real estate values in the area, including relocation costs.
- Existing Bridge Plans
- A CD containing the Design files for the project
- Earthwork files
- Utility Relocations/Reimbursable Utilities

The Office of Engineering Services shall:

- Assemble the VE Study Team and facilitator.
- Schedule times and location of the VE Study.
- Identify personnel from GDOT Offices (Bridge, G.O. Construction, Environmental Services, Right of Way, District Construction, Traffic Safety and Design) to serve as advisors to the VE Team for the duration of the VE Study.
- Ensure the VE Study is performed according to accepted procedures.
- Distribute VE Study Reports to GDOT Design Project Manager, VE Study Team Members and appropriate offices within two (2) weeks of VE Study.

The GDOT Design Project Manager shall:

- Provide written responses for each of the VE recommendations contained in the VE Study Report to the State Project Review Engineer. These responses shall contain sufficient engineering documentation to help make the decision to "implement/not

implement" the VE recommendations. These written responses should be submitted within four (4) weeks after distribution of the VE Study Report.

- Participate in the VE implementation Meeting
- Provide additional information to facilitate "implement/not implement" discussions and decisions.

The State Project Review Engineer shall:

- Coordinate with the GDOT Design Project Manager and other offices as appropriate to obtain feedback and consensus on each of the VE Report recommendations.
- Provide implement/not implement recommendations with supporting documentation to the Chief Engineer and FHWA (if full oversight project).
- Obtain implement/not implement approval of Chief Engineer and FHWA (if full oversight project).
- Distribute results to Design Project Manager, VE Study Team Members and appropriate offices.

Changes in approval to implement or not implement VE Recommendations:

- If after the VE Study is held and during Preliminary or Final Plan Development Activities it is determined that any of the VE Recommendations previously approved for implementation are not feasible from an engineering or practical standpoint, additional supporting documentation shall be provided to the State Project Review Engineer to justify "reversing" the previous decision to implement. This documentation shall include design related facts on why the previous decision to implement needs to be "reversed" along with a revised cost savings for the project. This will be submitted by the State Project Review Engineer to the Chief Engineer and FHWA (if full oversight project) for approval.
- If after the VE Study is held and during Preliminary or Final Plan Development Activities, it is determined that one of the previously rejected VE Recommendations should be accepted either in part or in whole, additional supporting documentation shall be provided to the State Project Review Engineer to justify "reversing" the previous decision to not implement. This will be submitted by the State Project Review Engineer to the Chief Engineer and FHWA (if full oversight project) for approval.

In order to meet FHWA requirements, the Office of Engineering Services will compile and submit the results of VE Studies to FHWA on a yearly basis. This report shall include:

- The number of VE Studies performed.
- Costs for performing the VE Studies.
- Estimated construction costs of projects studied.
- The total number of recommendations from VE Reports.
- The total dollar value of recommendations from VE reports.
- The total number of recommendations implemented.
- The dollar value of all recommendations implemented.

References:

History:

annual review: 12/02/14;

added to TOPPS: 10/6/98

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